



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/566,173

01/27/2006

Kiyomitsu Kudo

01272519030

2511

5514 7590 01/02/2008
FITZPATRICK CELLA HARPER & SCINTO
30 ROCKEFELLER PLAZA
NEW YORK, NY 10112

EXAMINER

ZIMMERMANN, JOHN P

ART UNIT

PAPER NUMBER

2861

MAIL DATE

DELIVERY MODE

01/02/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/566,173

Applicant(s)

KUDO ET AL.

Examiner

John P. Zimmermann

Art Unit

2861

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 November 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,4-12 and 14-21 is/are pending in the application.
- 4a) Of the above claim(s) 11,12 and 14-21 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2 and 4-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 January 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>09MAY06 & 16MAR07</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Restriction is required under 35 U.S.C. 121 and 372.

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1.

In accordance with 37 CFR 1.499, applicant is required, in reply to this action, to elect a single invention to which the claims must be restricted.

Group I, claim(s) 1-2 & 4-10, drawn to an ink container for containing inks.

Group II, claim(s) 11-12 & 14-16, drawn to an inkjet printing head capable of ejecting inks.

Group III, claim(s) 17-21, drawn to an inkjet printing apparatus for performing printing on a printing medium.

2. The inventions listed as Groups I, II, & III do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons: The groups listed above are not within the permitted combination of different categories of inventions. Currently there are three apparatuses. As set forth in the PCT/ISA/210 form, there is no special technical feature that defines a contribution over the prior art (EP 1375155 A, EP 1057644 A, & WO 2004/096559 A).

3. While the original requirement clearly stated that: "Applicant is advised that a reply to this requirement must include an identification of the species that is elected consonant with this

requirement (e.g., I, A, and (1), and a listing of all claims readable thereon, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered *nonresponsive* unless accompanied by an election,” applicant was apparently unclear as to the examiner’s intent following the telephone conversation on 19 November 2007, in which the examiner agreed that the “basic intent of the restriction requirement was to limit the application to one invention.”

4. In the interest of continuing the prosecution of this application and to avoid any further miscommunication as well as the possible impression of lack of concern on the part of the examiner, examiner has agreed to examine the currently elected invention as claimed, that being **Group I; Claims 1, 2 & 4-10.**

5. **Claims 11-21** are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention II or III. Applicant timely traversed the restriction (election) requirement in the reply filed on 26 November 2007.

6. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR § 1.17(i).

Priority

7. Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d).

Information Disclosure Statement

8. While the information disclosure statement (IDS) submitted on 09 May 2006 is in compliance with the provisions of 37 CFR 1.97, Foreign Patent Document (EP 1,057,464), a copy of which was provided by the applicant, appears to be a stretch for relevancy. While I can certainly appreciate the absorbent features of a diaper that IDS document EP 1,057,464 teaches, the claimed invention is not the absorbing member disclosed. Since the reference could in a way be considered relevant, it has not been stricken from the record, and in fact has been considered by the examiner. Additionally, examiner has clearly entered EP 1,057,644 into the record in the appropriate manner.

Drawings

9. Figures 11 & 12 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

10. The drawings are objected to as failing to comply with 37 CFR 1.84(p) because they do not include the following reference sign(s) mentioned in the description: #Wa1, #Wa2, & #Wa3 (Specification, Page 34), Additionally, #Wc1 is used to represent a variety of different portions of the claimed invention in both Figure 10A & 10C. Corrected drawing sheets in compliance

with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

11. Given that the application is subjected to PCT Rule 11, notably PCT 11.13 Special Requirements for Drawings:

- (l) Reference signs not mentioned in the description shall not appear in the drawings, and vice versa.
- (m) The same features, when denoted by reference signs, shall, throughout the international application, be denoted by the same signs.

The examiner respectfully points out that this objection in no way "imposes requirements beyond those imposed by the Patent Cooperation Treaty," and is merely pointing out a specific rule that was not complied with, a rule "to require new drawings if the drawings were published without meeting all of the requirements under the PCT for drawings," that echoes PCT Rule 11.13.

Specification

12. The disclosure is objected to because of the following informalities: a reference is made to #25 which appears to be a typographical error, intended to read #25C (Specification, Page 18).

Appropriate correction is required.

13. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Rejections - 35 USC § 102

14. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

15. **Claims 1-2 & 4-7** are rejected under 35 U.S.C. 102(b) as being clearly anticipated by **Hirano et al.**, (EP 1,057,644 A2).

a. As related to independent **claim 1**, Hirano et al. teach an ink container [i.e. supplementary ink tank] (Hirano et al. – Description, Column 15, Paragraph 61 and Figure 1, Reference #22, shown below) connectable and disconnectable to and from an ink supply path [i.e. ink inlet] (Hirano et al. – Description, Column 39, Paragraph 165 and Figure 43, Reference #501A, shown below) including a plurality of ink containing parts [i.e. ink tanks] for containing three or more different inks (Hirano et al. – Description, Column 15, Paragraph 62 and Figure 2, Reference #22Y, #22M, #22C, & #22B, shown below).

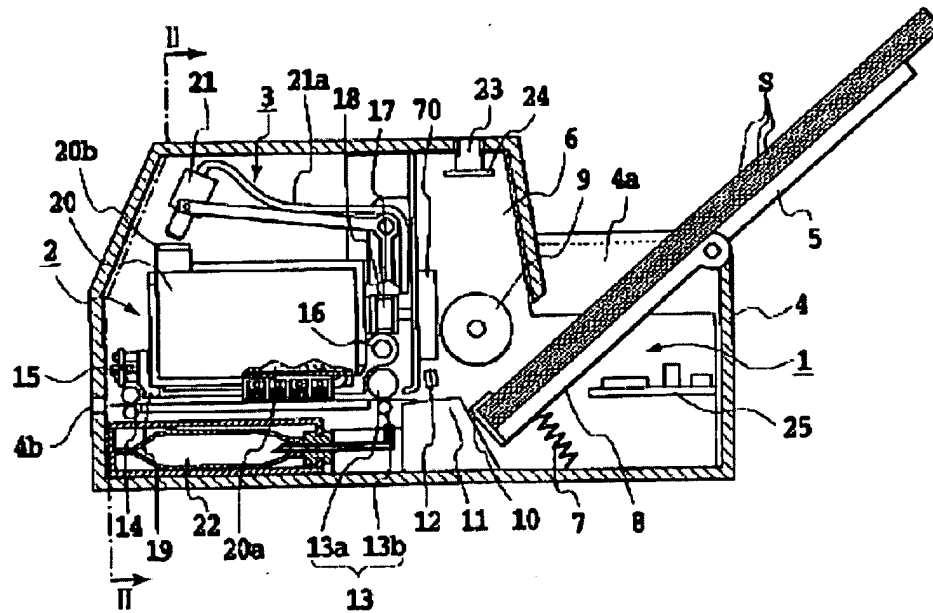


FIG.1

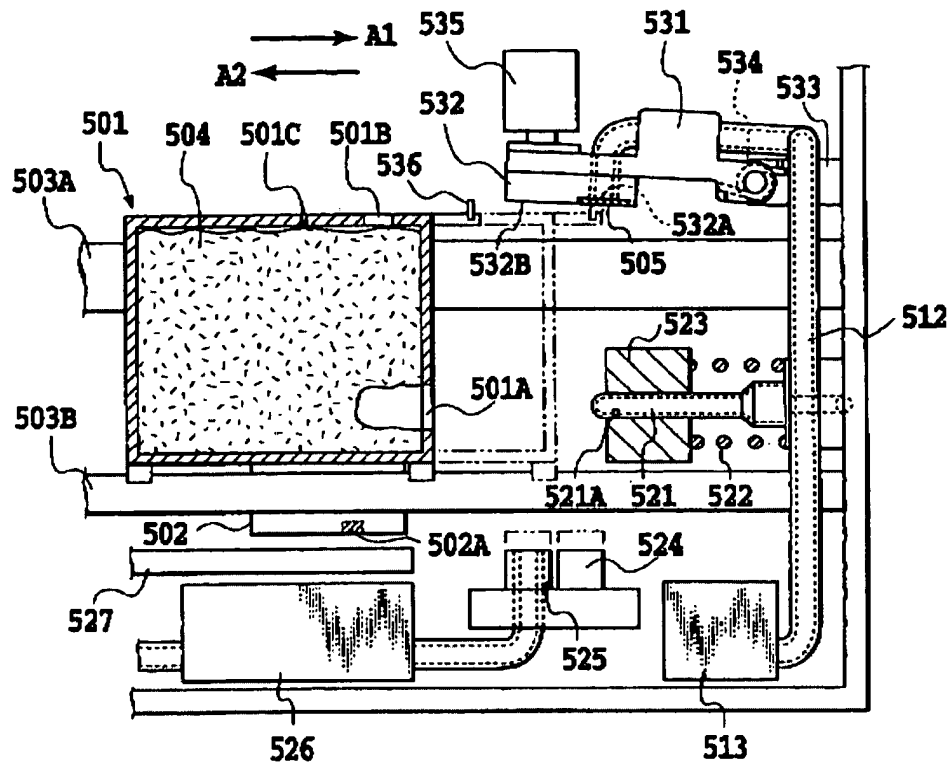


FIG. 43

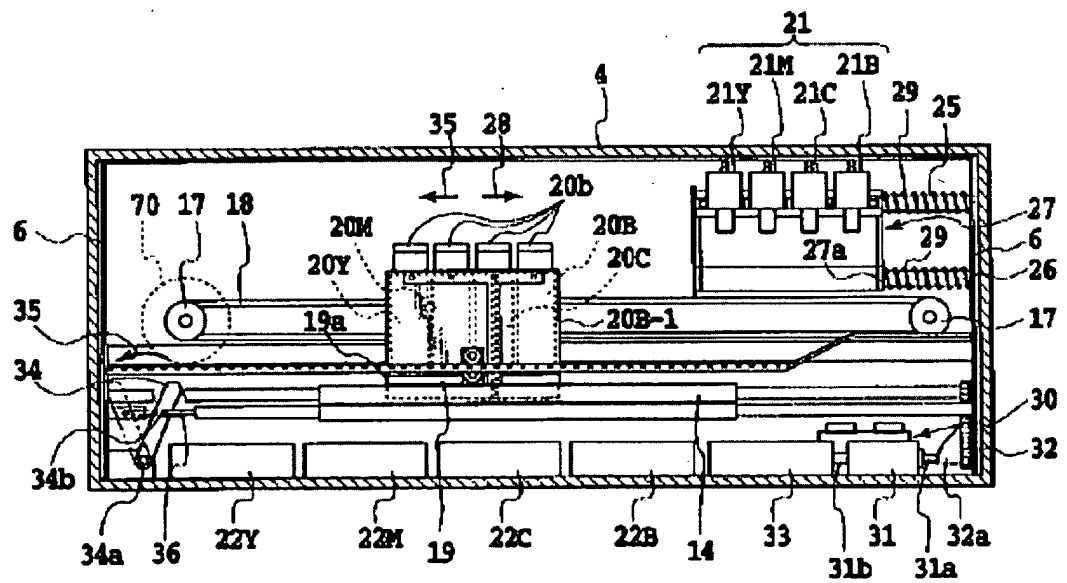


FIG. 2

FIG. 1 is a schematic diagram of a multi-channel flow control device. The device includes a main body 501 with four internal channels 501M, 501B, 501Y, and 501B. Each channel is equipped with an inlet valve 501A and an outlet valve 501C. The device is connected to a supply line 502 and a return line 503. The supply line 502 features a main valve 502A and four branch valves 502B. The return line 503 includes a main valve 503a and four branch valves 503b. The diagram shows a cross-sectional view of the device with dashed lines representing internal components. The reference #521 & #521A is indicated at the bottom right.

FIG.44

- c. Continuing with **claim 1**, Hirano et al. teach the plurality of supplying parts include a specific supplying part for supplying the ink which undergoes the most significant color change attributable to color mixing of the inks [i.e. Yellow of 501A and 501Y] and the plurality of supplying parts are disposed at respective intervals (Hirano et al. – Figure 44, Reference #521A, #501A, #501Y, & Arrows, shown above). Hirano et al. also teach the interval between the specific supplying part and another of the supplying parts adjacent thereto is greater than the intervals between other supplying parts excluding the specific supplying part (Hirano et al. – Figure 44, Reference #501B & #501Y and interval between as well as #501C & #501M and interval between, shown above). Hirano et al. go on to teach the inks contained in the plurality of ink containing parts include a yellow ink, a cyan ink, and a magenta ink; and the ink which undergoes the most significant color change attributable to color mixing of the inks is the yellow ink (Hirano et al. – Description, Column 15, Paragraph 62 and Figure 2, Reference #22Y, #22M, #22C, & #22B, shown above).
- d. As related to dependent **claim 2**, Hirano et al. teach the plurality of supplying parts can be connected and disconnected to and from a plurality of receiving parts [i.e. ink absorber] in the ink supply path (Hirano et al. – Description, Column 39, Paragraph 165 and Figure 43, Reference #521A & #504, shown previously).

- e. As related to dependent **claim 4**, Hirano et al. teach the plurality of supplying parts are disposed on the same plane (Hirano et al. – Figure 44, Reference #521A and Arrows, shown below).

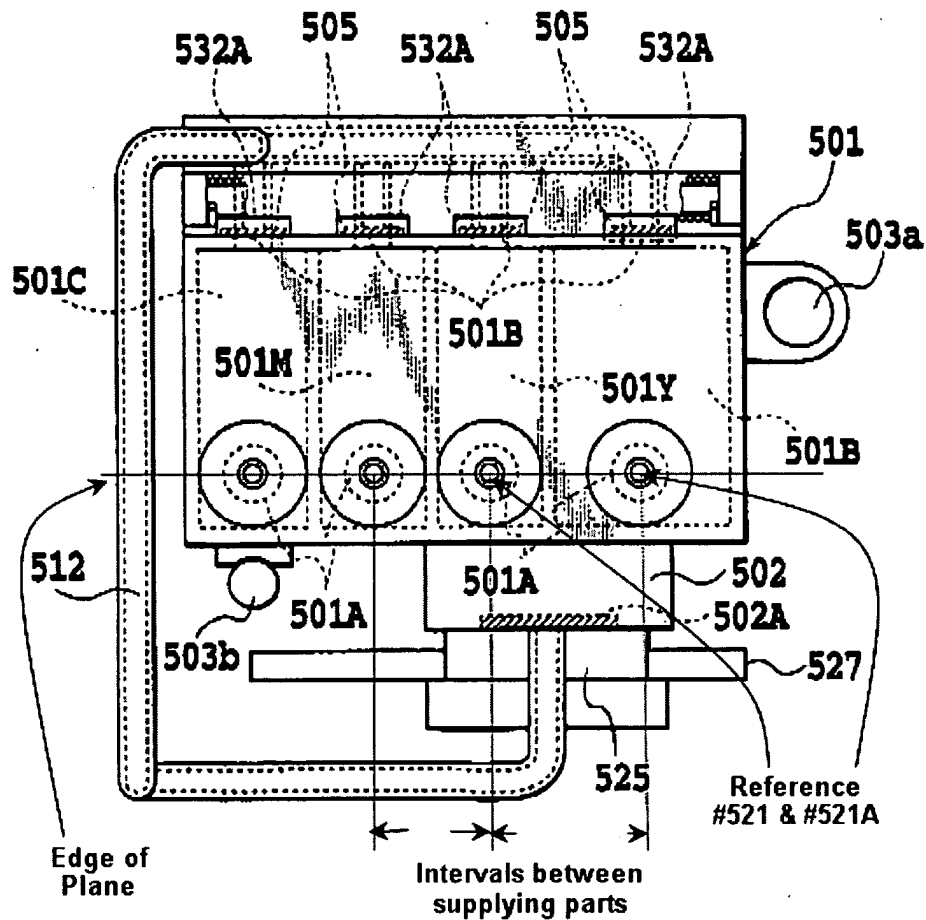


FIG.44

- f. As related to dependent **claim 5**, Hirano et al. teach a connecting section connectable and disconnectable to and from an ink supply path forming member [i.e. wall of sub-tank] in which the ink supply path is formed, wherein the plurality of supplying

parts are disposed at the connecting section (Hirano et al. – Description, Columns 29-30, Paragraphs 122-124 and Figure 43, Reference #532, #536, #501, #501A, #521A, & Connecting Section, shown below)

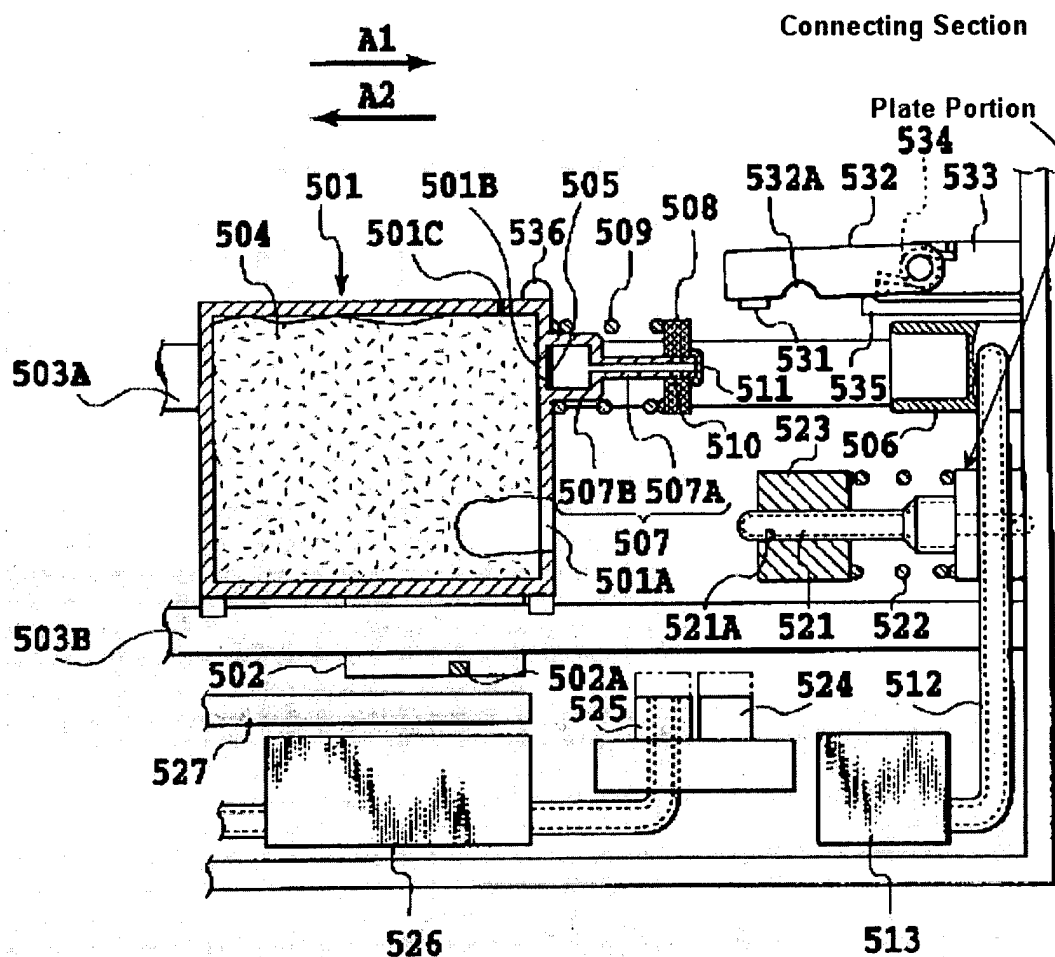


FIG. 25

g. As related to further dependent **claim 6**, Hirano et al. teach the connecting section includes a tubular connecting member in communication with the ink containing part, a seal member for sealing an end of the connecting member, and a keep plate [i.e. spring and plate] for securing the seal member at the end of the connecting member; and the

supplying part is located in an opening formed in the keep plate (Hirano et al. – Description, Columns 29-30, Paragraphs 122-124 and Figure 43, Reference #521, #523, #522, & Plate Portion of Connecting Section, shown above).

h: As related to further dependent **claim 7**, Hirano et al. teach the ink supply path forming member is a constituent member of an inkjet printing head (Hirano et al. – Figure 25, Reference #501, #502 & #502A, shown above).

Claim Rejections - 35 USC § 103

16. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

17. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

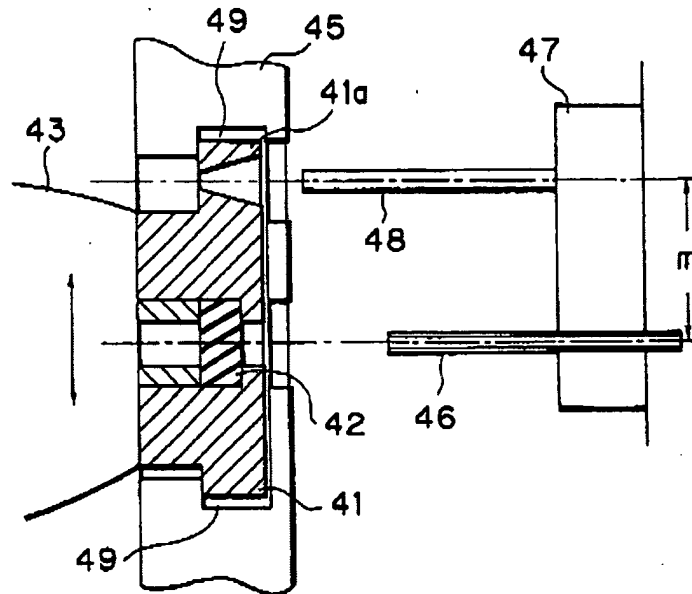
18. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out

the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

19. **Claims 8-10** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Hirano et al.**, (EP 1,057,644 A2) and further in view of **Hirosawa et al.**, (US 5,523,780 A).

a. As related to dependent **claim 8**, Hirano et al. teach the limitations of **claim 1** for the reasons above and while teaching a possible positioning means [i.e. cap member], *does not* specifically teach the positioning means which positions the ink container relative to the ink supply path forming member. *However*, Hirosawa et al. also teaches an ink container [i.e. ink cartridge container] with a positioning means [i.e. receptacle & gauge pin] which positions the ink container relative to the ink supply path forming member [i.e. ink supply portion] in which the ink supply path is formed (Hirosawa et al. - Detailed Description, Column 5, Lines 23-51 and Figure 7, Reference #45, #47, #41a, #48, & #42, shown below).

FIG. 7



b. As related to further dependent **claim 9**, Hirano et al. and Hirosawa et al. teach the limitations of **claim 8** for the reasons above and continue to teach a plurality of supplying parts adjacent to each other. Given the desire to use the positioning means as such, it would have been obvious to one of ordinary skill in the art at the time of the invention to provide the positioning means at any location adjacent to a supplying part not the least of which would include the specific supplying part, if for no other reason than to use the available space in the wider interval provided between the specific supplying part and the adjacent supplying part (Hirano et al. – Figure 44, Reference #501B & #501Y and interval between as well as #501C & #501M and interval between, shown below).

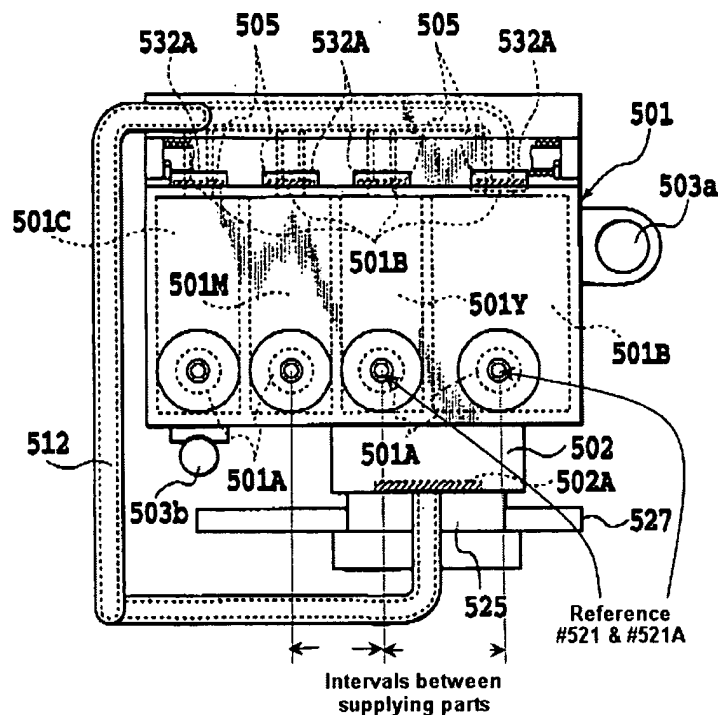


FIG.44

c. As related to further dependent **claim 10**, Hirano et al. and Hirosawa et al. teach the limitations of **claim 8** for the reasons above and continue to teach the positioning means includes a hole [i.e. receptacle] which can be engaged with a protrusion [i.e. gauge pin] provided on the ink supply path forming member [i.e. ink supply portion] (Hirosawa et al. – Figure 7, Reference #41a. #48, & #47 shown above.)

Given the same field of endeavor, specifically an ink container, an ink cartridge, and a recording head for use in an ink-jet printing apparatus, it is apparent that one of ordinary skill in the art at the time the invention was made would have been motivated to combine the ink tank, ink-jet cartridge, ink supplying apparatus, and method for supplying ink to include the connecting and disconnecting of the different strategically arranged

components as taught by Hirano et al. with the ink tank, ink supplying apparatus and method for supplying ink to include the connecting and disconnecting of different components using specific positioning means as taught by Hirosawa et al., in an effort to provide a coupling or connecting method for use by the different components of the ink supplying apparatus that overcomes the previous drawbacks of misalignment, including ink leakage, and further reduce the force applied to the ink delivery pipes (Hirosawa et al. – Background and Summary, Columns 1 & 2).

Conclusion

19. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Hirano et al. (US 6,540,321 B1) is a US Patent of the cited reference Hirano et al., (EP 1,057,644 A2).

20. ***Examiner's Note:*** Examiner has cited particular Figures & Reference Numbers, Columns, Paragraphs and Line Numbers in the references as applied to the claims above for the convenience of the applicant. Although the specified citations are representative of the teachings of the art and are applied to the specific limitations within the individual claim, other passages and figures may apply as well. It is respectfully requested from the applicant in preparing responses, to fully consider the references in their entirety as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior art or disclosed by the examiner.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John P. Zimmermann whose telephone number is 571-270-3049. The examiner can normally be reached on Monday - Thursday, 7:00am - 5:00pm.


Application/Control Number:
10/566,173
Art Unit: 2861

Page 18

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew Luu can be reached on 571-272-7663. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JPZ
JPZ


MATTHEW LUU
SUPERVISORY PATENT EXAMINER